LIN6049 Advanced Semantics: Puzzles in Meaning
2022/2023

Puzzle 5: adjectives and nouns in English

If submitting for feedback, submit electronically on Monday, **13 March 2023**.

If submitting for assessment, submit electronically via QM+ by 11.55pm on Thursday, **20 April 2023**.

Answer/complete A, B and C.

Consider the following sentence:

(1) The striped cats slept

Our new semantics for plural nouns like *cats* is given in (2), where we consider a small situation in which there are just three cats, Lupi, Lolo and Miss Marple:

(2) $[\![\textbf{cats}]\!]^s$ = {x: x is a cat in s and x is not an atom} = {Lupi+Lolo, Lupi+Miss Marple, Lolo+Miss Marple, Lupi+Lolo+Miss Marple}

Our semantics for adjectives such as *striped*, from *Intro to Semantics*, is:

(3) $[\![\textbf{striped}]\!]^s$ = {x: x is striped in s}

In *Intro to Semantics*, we didn't distinguish between atoms vs. non-atoms individuals, so, if Lupi, Fido the dog and Lucy the zebra were our striped individuals in the situation, we would have:

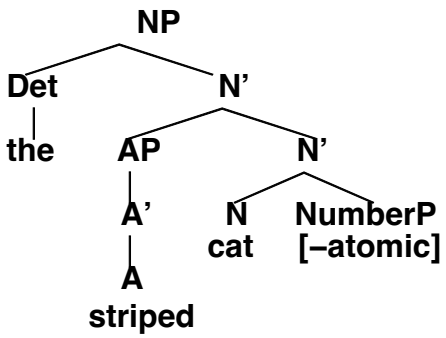
(4) $[\![\textbf{striped}]\!]^s$ = {Lupi, Fido, Lucy}

(A) What problems do these assumptions raise for (1)? Recall that adjectives like *striped* combine with nouns via the Predicate Modification rule:

Predicate Modification
If X has Y and Z as its only daughters and Y and Z denote sets of individuals, $[\![X]\!]^s = [\![Y]\!]^s \cap [\![Z]\!]^s$

Assume the following tree for the NP *the striped cats*:

(1)



(B) How should such problems be avoided? Your proposal to deal with (1) needs to work when *striped* is in other positions or combines with singular nouns as well, as in (2) and (3):

(2) The cats are striped
(3) The striped cat slept

(C) Show that indeed it does.

Note on word count. Examples, definitions, tests, etc. do not count towards the word count. You should aim for 600-700 words of prose per puzzle.